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EXAMINER	
MOORE, IAN N	
ART UNIT	**PAPER NUMBER**
2661	

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/781,059	CHIKAZAWA ET AL.	
	Examiner	Art Unit	
	Ian N Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 17* is/are rejected.

7)☒ Claim(s) *3-16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. An objection to the abstract is withdrawn since it is being amended accordingly.

2. Claim objections, on claims 1,11,13 and 16 are withdrawn since they are being amended accordingly.

3. New claims 17 and 18 are added.

4. Claims 1,2, and 17 are rejected by the same ground of rejections.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuendoff (U.S. 6,657,969) in view of Mitsuki (JP 09-093278).

Regarding claim 1, Neuendorff discloses a transmission apparatus (see FIG. 3, SONET node 130) having a function to switch a line with a redundant configuration comprising a working line (see FIG. Ocn(W) 210.2 which carries working channel) and a protection line (see FIG. 3, Ocn(E) 210.5 which carries the protection channel) from said working line to said protection line in the event of a transmission-line failure on said working line (see col. 1, lines 16-35, 50-64; in the

event of the failure in SONET BLSR ring performs a ring switch and/or span switch from working to protection channel), said transmission apparatus comprising:

a cross-connect-classifying means (see FIG. 4, Provisioning Agent 520, which is within TCC 210.3 (see FIG. 3)) for inputting cross-connect information from an external source (see FIG. 3, computer 150; see col. 5, lines 34-55; note that personal computer 150 is used to provision the cross-connect to SONET node 130) and classifying said information into cross-connect categories (see col. 7, lines 9-60; Table generation steps TGS I; col. 11, lines 55 to col. 12, lines 60; see col. 15, lines 25-42; Table 5, note that the user provisioned cross-connects information are categorized as add, drop, or pass-though at each STS channel),

wherein said cross-connect information includes a signal direction (see col. 4, lines 10-67; Table 2 and Table 3; the cross-connect information includes STS channel number and its direction East or West direction) and information (Table 2 and Table 3; the cross-connect information includes STS channel number), requesting a station employing said transmission apparatus (see FIG. 4, BTP 410 of Node 130; see col. 7, lines 25-40; see col. 11, lines 35 to col. 12, lines 60; note that provision agent 520 sends the provisioning/cross-connect information from TGS.1A through TGS.1E are sends to the BTP 410 with the requested cross-connect type of information) to carry out one of the following pieces of processing:

addition of a signal to either said working line or said protection line (see col. 11, lines 55 to col. 12, lines 60; see col. 15, lines 1-45; Table 5, East/West Local STS Information Table, ELSIT or WLIST; a signal which maps to STS channel is to

source STS of working or protection of outgoing lines; also see squelched Added, TGS.4A-2A);

dropping of a signal from either said working line or said protection line (see col. 11, lines 55 to col. 12, lines 60; see col. 15, lines 1-45; Table 5, East/West Local STS Information Table, ELSIT or WLIST; a signal which maps to STS channel is dropped from the destination STS of working or protection of incoming lines; also see squelched dropped, TGS.4A-2B);

passing-through of a signal (see col. 11, lines 55 to col. 12, lines 60; see col. 15, lines 1-45; Table 5, East/West Local STS Information Table, ELSIT or WLIST; a signals which maps to STS channel is passthrough between source STS and destination STS of working or protection of between outgoing and incoming lines; also see squelched dropped, TGS.4A-2C and 2D); and

a communication means (see FIG. 4, a combined system of BLSR Table Provisioning, BTP, 410 and BLSR UDP Server, BUS, 420 with communications means to neighbor node 130.j) for gathering the cross-connect category of each signal-adding or signal-dropping transmission apparatus (see col. 15, lines 25-45 to col. 16, lines 5; adding, dropping, or passthrough cross connect) of a channel (see col. 7, lines 15-20; TSG.1D where STS channel number) and node information (see col. 7, lines 11-15; TSG.1B. node ID30-40; note that BTP receives node ID and STS channel number information from the agent 520 along with their add/drop/passthrough cross connection types),

identifying said signal-adding or signal-dropping transmission apparatus by communications with an adjacent transmission apparatus (see FIG. 4, neighbor Node 130.j) for each channel (see col. 7, lines 35-57; TGS.3D. and TGS.4A-1; note that BTS sends cross-connect request information which contains signal add/drop/passthough to each neighbor node, where the STS channel will be added/dropped/passthrough in order to identify and construct the ring map and construct squelch table; also see col. 12, lines 60 to col. 16, lines 34);

a connection-implementation classifying means (see FIG. 4, BLSR Table Provisioning, BTP, 410 which creates and update routing table, ELSIT/WLSIT table, and squelch table) for classifying an implementation of connection between terminals (see FIG. 2 and 3; a communication terminals which connect to low or tributary interfaces (i.e. DS3, DS1, STS-1 electrical, Fast Ethernet, etc.) of the SONET/SDH BLSR node 130, where the payload for each terminal is added, dropped, pass-through to/from BLSR in form of VT or STS channels) to a corresponding connection category (see col. 14, lines 54 to col. 16, lines 34) from connection categories corresponding to a variety of implementation of connections implementation in accordance with gathered cross-connect categories of other transmission apparatuses (see col. 7, lines 55 to col. 8, lines 6; see col. 14, lines 1-65; note that neighbor nodes responds the to the cross connect request, and the ring map and squelch table is created or updated according to the responded cross connect information. Each type/category of cross connect in each SONET/SDH

node provides a connection between the communication terminals for routing/connecting their low or tributary traffic over SONET/SDH BLSR).

the cross-connect category of said transmission apparatus employed in said station to create a table (see col. 4, lines 10-67; a squelch table, Table 2; see col. 9, lines 30-44; step TGS.4, see col. 14, lines 54 to col. 16, lines 35; note that based on the responds from East neighbor node and west neighbor node, the squelched and payload tables are created) for executing control to switch a line in the event of a failure for each channel (see col. 2, lines 15-64; see col. 23, lines 55-65; note that when the failure occurs the traffic is switched from one line to the other and the squelched table is used to prevent misconnection);

a switching control means (see FIG. 3, circuit 324 within TCC card which control by using K bytes for APS switching) for executing control to switch said line based on a location of occurrence of a failure identified by said table according to said implementation of the connection (see FIG. 3, circuit 324 controls Ocn(W) and its OcnP west processor, and Ocn(E) with its OcnP east processor by indicating K bytes in order to perform a ring or span switch after the failure by utilizing a squelch table to avoid channel misconnection; see col. 2, lines 15-64, see col. 6, lines 1-34).

Neuendorff does not explicitly disclose a failure-reporting means for transmitting information on a failure including node information of said station in the event of said failure on a transmission line, between said station and an adjacent station; a failure-occurrence-location-identifying means for identifying the location of occurrence of a failure from received information on said failure; means for

executing control to switch said line based on a location of occurrence of a failure identified by said failure-occurrence-location-identifying means.

However, Mitsuki discloses a failure-reporting means for transmitting information on a failure (see FIG. 7, a combined system of High speed Transmitter HT, supervision unit SV and Controller MP, for transmitting Path Alarm Indication Signal P-AIS and/or SF-R alarm signal) including node information of said station (see FIG. 35a, SF-R/F/E/Long or SF-R/F/E/short; where node E is the SF detection station) in the event of said failure on a transmission line (see FIG. 35 a, a failure between node F and E) between said station (see FIG. 35 a, Node E) and an adjacent station (see FIG. 35 a, Node F); see page 4-5, paragraph 13-20; node E sends the alarm signal with node ID "E" in the message to node F);

a failure-occurrence-location-identifying means (see FIG. 7, a combined system of reception interface unit Receiver RT, supervision unit SV and Controller MP for receiving SF-R and AIS signals; see page 9-10, paragraph 60-63) for identifying the location of occurrence of a failure from received information on said failure (see FIG. 35a, SF-R/F/E/Long or SF-R/F/E/short; node F received the SF signal and the signals contains both node IDs, nod E and F; thus, location of a failure identified in the alarm message; page 4-5, paragraph 13-20).

a switching control means (see FIG. 7, a combined system of HS, changed system unit and main signal system unit HM) for executing control to switch said line based on a location of occurrence of a failure identified by said failure-occurrence-location-identifying means (page 4-5, paragraph 13-20; page 9-10, paragraph 60-63;

note that upon detection of SF or SD failure and reception of SF or SD signals along with the node IDs, the node E or F performs APS switching from failed channel to protection channel by utilizing K bytes defined by SONET BLSR) and said table according to said implementation of the connection (see FIG. 23-24, connection tables; see FIG. 7, MP and HS; page 9-10, para. 60-63; page 14, para. 98-103; page 9-10, para. 60-63; page 14, para. 98-103).

However, the above-mentioned claimed limitations are taught by Mitsuki. In view of this, having the system of Neuendoff and then given the teaching of Mitsuki, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Neuendoff, for the purpose of providing BSLR failure detection, alarming and APS switching mechanism in accordance with squelch table, as taught by Mitsuki, since Mitsuki states the advantages/benefits at page 5, paragraph 21-23 that it would provide an improvement in the speed of squelch processing. The motivation being that by utilizing BLSR protocol and squelch table, it will accelerate the protection switching time after failure detection, which is increase, the reliability of the network.

Regarding claim 2, Neuendoff discloses determines said cross-connect information to pertain to one of cross-connect categories of:

addition of a signal to said working line (see col. 11, lines 55 to col. 12, lines 60; see col. 15, lines 1-45; Table 5, East/West Local STS Information Table, ELSIT or WLIST; a signal which maps to STS channel is added to source STS of working east/west of outgoing line; also see squelched Added, TGS.4A-2A);

dropping of a signal to said protection line (see col. 11, lines 55 to col. 12, lines 60; see col. 15, lines 1-45; Table 5, East/West Local STS Information Table; ELSIT or WLIST; a signal which maps to STS channel is dropped from destination STS of working or protection of incoming lines; also see squelched dropped, TGS.4A-2B);

Regarding claim 17, Neuendoff discloses addition of a signal to working line or said protection line, and dropping a signal from either working line or said protection line as described above in claim 1. Neuendoff does not explicitly disclose addition of a signal to working line and said protection line. Mitsuki discloses addition of a signal to working line and said protection line, and dropping a signal from either working line or said protection line (see page 3, paragraph 3-5; and see FIG. 31; adding signal to both working and protect lines, and selecting from either working or protection line, for 1+1 protection). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a specific type of cross connect to add signal to both working and protecting lines, as taught by Mitsuki in the system of Neuendoff, for the same motivation as described above in claim 1.

Allowable Subject Matter

7. Claims 3-16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 1-20-2005 have been fully considered but they are not persuasive.

Regarding claims 1, 2, and 14, the applicant argued that, "...claim 1 includes features where a connection implement between terminal is not fixed, but a variety of connection implementations are available..." in page 13, paragraph 1, 3.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **where a connection implement between terminal is not fixed, but a variety of connection implementations are available**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding claims 1, 2, and 14, the applicant argued that, "...both Neuendoff and Mitsuki fail to disclose the features of claim 1, addition of a signal to both said working line and said protection line, dropping of a signal from both said working line and said protection, and dripping of a signal from either said working line or said protection line and then relaying said sign to either said working line or said protection line..." in page 14, paragraph 6; page 15, paragraph 2.

The examiner respectfully disagrees with the argument since claim 1 clearly recites "....said transmission apparatus to carry out **one** of the following

pieces of processing:..." in line 8. In claim 1, lines –15, there are six (6) pieces of processing recited. Neuendoff discloses three (3) pieces of processing as set forth in the first rejection page 5. Since claim 1 clearly recites, "**one of the following pieces**", it is clear that Neuendoff discloses the applicant claimed invention, and thus Neuendoff is not required to disclose the **features** as argued and stated above by the applicant.

The applicant argued that, "...both Neuendoff and Mitsuki fails to disclose ...a connection-implementation classifying means for classifying an implementation of connection between terminals into a corresponding connection category from connection categories corresponding to a variety of implementation of connections..." in page 15, paragraph 4.

In response to applicant's argument, the examiner respectfully disagrees that the combined system of Neuendoff and Mitsuki fails to disclose above limitations.

Neuendoff discloses a connection-implementation classifying means (**see FIG. 4, BLSR Table Provisioning, BTP, 410 which creates and update routing table, ELSIT/WLSIT table, and squelch table**) for classifying an implementation of connection between terminals **(see FIG. 2 and 3; a communication terminals which connect to low or tributary interfaces (i.e. DS3, DS1, STS-1 electrical, Fast Ethernet, etc.) of the SONET/SDH BLSR node 130, where the payload for each terminal is added, dropped, pass-through to/from BLSR in form of VT or STS channels**) to a corresponding connection category (**see col. 14, lines 54 to**

col. 16, lines 34) from connection categories corresponding to a variety of implementation of connections **(see col. 7, lines 55 to col. 8, lines 6; see col. 14, lines 1-65; note that neighbor nodes responds the to the cross connect request, and the ring map and squelch table is created or updated according to the responded cross connect information. Each type/category of cross connect in each SONET/SDH node provides a connection between the communication terminals for routing/connecting their low or tributary traffic over SONET/SDH BLSR**).

Mitsuki also discloses an implementation of connection between terminals **(see FIG. 2, 19, 34; a communication terminals which connect to low or tributary interfaces (i.e. DS3, DS1, STS-1 electrical, Fast Ethernet, etc.) of the SONET/SDH node, where the payload for each terminal is added, dropped, pass-through to/from BLSR in form of VT or STS channels; page 4, para. 12, page 7, para. 40-43, page 13, para. 92)** to a corresponding connection category **(see FIG. 7, MP and HS)** from connection categories corresponding to a variety of implementation of connections (see FIG. 23-24, connection tables; **page 9-10, para. 60-63; page 14, para. 98-103).**

Moreover, it is well known in the art of SONET/SDH and standard (e.g. GR-1230-CORE) that each SONET/SDH system transports signals/payloads of communication terminals (e.g. voice, IP, ATM, Ethernet) by cross connection or mapping these payload into a SONET BLSR channel so that the payloads can be protected by the SONET BLSR protocol. Thus, implementing a connection between

terminals into connection category from among connection categories corresponding to a variety of connection in accordance with said gather cross-connect categories of other transmission apparatus is clearly disclosed by the combined system of Neuendoff and Mitsuki. Moreover, these limitations are also well known in the art of SONET/SDH.

The applicant argued that, "...Mitsuki also fails to disclose...a switching control means for executing control to switch said line according to said implementation of connection..." in page 15, paragraph 5, and 7.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Neuendoff discloses implementing a connection between terminals into a corresponding category as recited in above response, and switching identified by said table according to said implementation of the connection as set forth above rejection.

Mitsuki also discloses a switching control means **(see FIG. 7, a combined system of HS, changed system unit and main signal system unit HM)** for executing control to switch said line based on a location of occurrence of a failure identified by said failure-occurrence-location-identifying means **(page 4-5, paragraph 13-20; page 9-10, paragraph 60-63; note that upon detection of SF**

or SD failure and reception of SF or SD signals along with the node IDs, the node E or F performs APS switching from failed channel to protection channel by utilizing K bytes defined by SONET BLSR) and said table according to said implementation of the connection (**see FIG. 23-24, connection tables; see FIG. 7, MP and HS; page 9-10, para. 60-63; page 14, para. 98-103; page 9-10, para. 60-63; page 14, para. 98-103).** Thus, Mitsuki performs switching identify by the connection/ring tables/map in accordance with the implementation of predefine connection or cross-connection.

Thus, the combined system of Neuendoff and Mitsuki teaches the applicant argued limitation.

In view of the above, **the examiner respectfully disagrees** with applicant's argument and believes that the combination of references as set forth in the 103 rejections is proper.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
4/7/05

BOB PHUNKULH
PRIMARY EXAMINER 4/14/05